THE GLOBAL CONNECT INITIATIVE: ACCELERATING ENTREPRENEURSHIP AND ECONOMIC OPPORTUNITY BY EXPANDING INTERNET ACCESS GLOBALLY

— U.S. INTERAGENCY STEERING GROUP REPORT —
DECEMBER 2016

PHOTO: Installation of towers providing connectivity infrastructure (OPIC)

GLOBAL CONNECT INITIATIVE
1.5 BILLION MORE ONLINE BY 2020

TABLE OF CONTENTS

section titles are hyperlinked for your convenience
- only available when viewing in MS Word -

SUMMARY

Over 4 billion of the world's 7.2 billion people do not yet have access to the Internet. More than half of the earth's population remains without the remarkable benefits that the Internet and related technologies bring to economic and social development. In the least developed countries, only 1 in every 10 individuals has regular access to the Internet, and rates are even worse for women and girls. To address this problem, on September 27, 2015, the U.S. Department of State launched the Global Connect Initiative with the goal of connecting the next 1.5 billion people to the Internet by 2020. The Global Connect Initiative is a multi-stakeholder effort based on the notion that all stakeholders, including governments, the private sector, civil society, multilateral development banks, and international organizations, must play their part to expand connectivity. It seeks to mainstream the idea that connectivity is as critical to economic development as other forms of infrastructure, like roads, ports, and electricity.

On June 24, 2016, through an executive order the President of the United States created the Global Connect International Connectivity Steering Group (Steering Group), bringing together 12 federal government departments and agencies, all relevant policy offices within the Executive Office of the President, as well as one independent federal commission, to ensure a coordinated and consistent approach to agency implementation of the goals of the Global Connect Initiative with the Department of State as chair. The executive order called on the initiative to focus on: encouraging foreign countries to prioritize Internet connectivity in development plans, promote the formation of region-specific multi-sector working groups to ensure technical and regulatory best practices, and encourage the development of digital literacy programs in developing nations.

The Steering Group agencies have realized substantial progress in advancing these goals in five categories of action, with over 40 programs and activities that have reached more than 30 countries. These activities included the following examples:

Expanding International Cooperation on Connectivity

- At the April 14 **Global Connect Initiative High Level Event**, the U.S. Secretary of State and World Bank President hosted 150 participants, including finance ministers and other senior governments officials, multilateral development bank presidents, and private sector and civil society leaders, to catalyze further action by all stakeholders and emphasize the importance of connectivity to development, helping to create a policy environment that sustains a healthy Internet by encouraging investment and innovation. At the High Level Event we identified dozens of global actions from foreign governments and key stakeholders that supported international connectivity and were valued at over $20 billion.

- As part of the newly formed **U.S.-Argentina Digital Economy Working Group**, the United States and Argentina decided to develop a Global Connect joint work plan to include capacity building and cooperation on connectivity initiatives with other stakeholders, such as the Inter-American Development Bank and World Economic Forum.

Strengthening the Financing of Connectivity

- The **U.S. Overseas Private Investment Corporation** (OPIC) has over $1 billion in current financing for various information and communications technology (ICT) projects worldwide, including commitments this year of $171 million in India and $4.1 million in Kenya in 2016.

- The Departments of State and Treasury have engaged directly with multilateral development banks and international finance institutions to support increased lending for connectivity and to advocate for policy changes to raise the profile of connectivity.

Implementing Development Assistance

- Through its **Global Broadband and Innovations Program**, the U.S. Agency for International Development (USAID) has implemented development assistance programs to expand connectivity – including supporting the development of national broadband plans, TV white space technology deployments, and business model innovations to reach last-mile communities – in Indonesia, Botswana, Jamaica, Kenya, and the Philippines with partners such as Microsoft and NetHope.

- A **United States Trade and Development Agency (USTDA) grant for technical assistance** is helping the Brazilian State of Pará design the expansion of its fiber optic network with the goal of identifying the technologies best suited to increase the reach of high-speed Internet service to the maximum number of citizens in the Amazon region.

Building Capacity on Technical and Regulatory Best Practices

- Since September 2015, the U.S. Federal Communications Commission (FCC), through its long-standing **International Visitor Program**, has hosted 382 visitors from 67 countries, providing technical and policy information on a variety of telecommunications issues. It also has organized and conducted several capacity-building workshops and programs overseas with partners that include the Association of Southeast Asian Nations (ASEAN) and India.
- Working with the Business Council for International Understanding, the Department of State coordinated an interagency group of experts to provide best practices and lessons learned on broadband infrastructure deployment and digital inclusion in a series of digital infrastructure best practices workshops in India in August 2016 as part of the Digital Infrastructure, Innovation and Entrepreneurship Working Group of the U.S.-India CEO Forum.

Developing Stakeholder Partnerships

- The Department of State has worked with the Institute for Electrical and Electronics Engineers and the World Bank to support three successful **Global Connect Stakeholders Conferences** to improve coordination of connectivity programs and share best practices. Stakeholders decided to look for opportunities to integrate connectivity into hard infrastructure projects (i.e., the "dig-once" policy).

- USAID invests in programs that support more inclusive adoption of the Internet through efforts to shrink the gender digital divide, expand digital literacy, and lower the costs of access including through funding the **Alliance for Affordable Internet**, a global coalition that works to catalyze policy change in order to drive down Internet prices.

The Steering Group's considerable efforts are having an impact, although significant work remains. Each agency has considered how it can better leverage its own resources to expand connectivity, and the Steering Group will continue to work to improve coordination of these efforts. In the coming year, the Steering Group will build on its momentum from actions in 2016 to strengthen Internet connectivity, improve regulatory frameworks, and expand digital literacy programs to make further progress toward bringing the next 1.5 billion people online by 2020.

In addition, through the Global Connect Initiative, we are working with countries as varied as Argentina, Liberia, and India to help expand connectivity. As with the rapid adoption of mobile technologies, the majority of investment will continue to come from the private sector. Targeted multi-stakeholder efforts like the Global Connect Initiative can help to tackle barriers to access and unlock latent resources, accelerating the diffusion of the Internet's benefits to those who are still unconnected.

Connectivity (Indonesia, USAID)

INTRODUCTION

In 2015, the global Internet reached a new milestone: Internet adoption surpassed 3 billion people, growing from 2.9 billion users in 2014 to nearly 3.2 billion in 2015. But while this growth is to be applauded, much more effort is needed to ensure that those already connected enjoy open, secure Internet access, and that the benefits of the Internet spread to the remaining 4 billion people who remain without connectivity. It is now well established that Internet connectivity is one of the most important drivers of economic growth and opportunity. To spur more action to close this digital divide, the U.S. Department of State launched the multi-stakeholder Global Connect Initiative in 2015 to help bring an additional 1.5 billion new Internet users online by 2020.

By Executive Order 13731 issued on June 24, 2016, the President directed the U.S. government to better organize its efforts to accelerate entrepreneurship and economic opportunity in the United States and abroad, including by expanding Internet access globally. The Executive Order created the Global Connect International Connectivity Steering Group (Steering Group), chaired by the Department of State, and comprising representatives of 12 federal departments and agencies and one independent federal commission in all. The Steering Group agencies meet regularly to strategically improve coordination and catalyze further action to increase Internet connectivity globally in support of the Global Connect Initiative. U.S. government activities promoting connectivity have increased in recent years, and the Steering Group agencies work closely with each other and the White House on addressing this global challenge.

The Executive Order establishes three strategic priorities for the Global Connect Initiative: encouraging foreign countries to prioritize Internet connectivity in development plans, promoting the formation of region-specific multi-sector working groups to ensure technical and regulatory best practices, and encouraging the development of digital literacy programs in developing nations.

The Steering Group agencies immediately set about the task of executing the Executive Order, including increased coordination of their considerable initiatives already underway. The Executive Order calls for the Steering Group to meet regularly, to assess its progress toward the Global Connect Initiative's objectives. The Under Secretary of State for Economic Growth, Energy and the Environment chaired the first senior-level Steering Group meeting on September 27, 2016. In addition, the Steering Group has convened at the working level five times since the Executive Order was issued.

The Executive Order also mandated that the Steering Group submit a report to the Secretary of State within six months and authorized the Secretary of State to request a periodic update of the report every 12 months thereafter. As required by the Executive Order, this report describes representative efforts of the Steering Group agencies taken during 2016 in support of the Global Connect Initiative's goal of connecting the next 1.5 billion people to the Internet by 2020. It describes the current state of agency procedures, requirements, programs, and policies related to the goals of the Global Connect Initiative and provides updates on the strategy and evaluation criteria for Federal contributions to the Global Connect Initiative. The report describes progress in five areas: expanding international cooperation on connectivity, strengthening financing for connectivity, implementing development assistance programming, building capacity overseas on technical and regulatory best practices, and developing stakeholder partnerships.

EXPANDING INTERNATIONAL COOPERATION ON CONNECTIVITY

Building a broad coalition of support for expanding Internet connectivity is critical to international efforts to bridge the digital divide. The Steering Group agencies have sought to bring together a broad range of stakeholders to raise awareness of the importance of connectivity to development and to catalyze further action. A high priority has been to build support among development organizations and international financial institutions. This effort has also extended to multilateral organizations – both global and regional – as well as to individual partner countries and has ranged from Argentina to ASEAN and from the G-7 to the Arctic Council.

Launch of the Global Connect Initiative

On September 27, 2015, the Department of State launched the Global Connect Initiative on the margins of the 70th session of the United Nations (UN) General Assembly in New York. With this initial launch, the United States began the process of building a coalition of support for the initiative and its goal of connecting the next 1.5 billion to the Internet by 2020. The Under Secretary of State for Economic Growth, Energy and the Environment was joined at the launch by the World Bank President and the then Presidents of Estonia and Tanzania. The launch of the initiative resulted immediately in endorsements by a wide variety of stakeholders including Microsoft, Facebook, Ericsson, Human Rights Watch, Article 19, and Public Knowledge.

Building International Support

Global Connect Initiative High Level Event in Washington, D.C., on April 14, 2016

In late 2015 and early 2016, the Department of State led an effort to further build an international coalition of support for the initiative. The Department of State established a set of Connectivity Principles in order to articulate the foundation of the initiative that stakeholders were being asked to support. U.S. embassies and diplomatic missions were asked to inform governments and other stakeholders around the world about the initiative and ask them to express support. As a result of this intense global outreach, more than 40 countries have expressed support. More information about supporters of the initiative can be found here .

In December 2015, the Department of State hosted a Global Connect Initiative event in New York on the margins of a UN General Assembly High Level Meeting on the 10-year review of the World Summit on the Information Society (WSIS+10). The Department of State convened the event with Ministers from Pakistan and Estonia, as well as key industry players. Hosting this event on the margins of the WSIS+10 allowed the Department of State to highlight how the Global Connect Initiative helps meet the ICT needs of developing countries and is contributing to the UN 2030 Agenda for Sustainable Development.

April 2016 High Level Event

Together with the World Bank President, the Secretary of State hosted a Global Connect Initiative High Level Event at the World Bank on April 14, 2016, where they were joined by more than 150 participants in support of the initiative and its underlying objectives. Finance ministers and other senior officials from over 30 countries attended the event along with presidents of multilateral development banks and private sector and civil society leaders. The event helped further raise awareness within the development finance community of the importance of Internet connectivity to economic and social development.

In association with the High Level Event, stakeholders highlighted more than 65 new and existing programs and initiatives valued at over $20 billion in support of connectivity around the world. These programs accounted for ongoing and planned investments valued in the tens of billions of dollars, in many cases leveraging public investment to support larger private sector investment in connectivity infrastructure.

United Nations Broadband Commission on Sustainable Development

On September 18, 2016, the Under Secretary of State for Economic Growth, Energy and the Environment participated in the annual meeting of the UN Broadband Commission on Sustainable Development in New York and presented the goals and activities behind the Global Connect Initiative, describing how they dovetail with the UN 2030 Agenda for Sustainable

UN Broadband Commission (New York, USA 2016, ITU Pictures)

Development Goals (SDGs) and UN goals for connectivity. Many other commissioners expressed support for the key objectives of the Global Connect Initiative and, in particular, were keen on finding

ways to accelerate major infrastructure projects amongst the international development finance institutions. The Commission supported the call of the Under Secretary of State for Economic Growth, Energy and the Environment for representatives of multinational development banks (MDBs) to participate in the next meeting of the Commission in order to jointly discuss MDB efforts to support broadband expansion.

G-7 and G-20

Led by the Departments of State and Commerce respectively, the U.S. delegations to the G-7 and G-20 helped ensure endorsement by member states of the goal of the Global Connect Initiative to connect the next 1.5 billion people to the Internet by 2020. Joint statements of both multilateral groups included commitments to this goal and the Joint Declaration by G-7 ICT Ministers welcomed the Global Connect Initiative specifically.

Advancing Connectivity through Trade

Growth in digital trade and increased investment in telecommunications and related technology infrastructure contribute positively to increased global Internet connectivity. The Office of the U.S. Trade Representative (USTR) works to help achieve these goals through the negotiation of binding trade commitments and the endorsement of best practices for digital trade, and through highlighting the value of the Internet for development, including through enhanced export opportunities for small businesses and agricultural producers. U.S. trade agreements include strong rules to ensure free flows of data, support the competitive telecommunications systems that reduce costs and therefore ease access, and require parties to adopt consumer protection, anti-spam, and privacy policies. USTR reports such as the annual National Trade Estimate on Foreign Trade Barriers and the 2016 Beyond AGOA: Looking to the Future of U.S.-Africa Trade and Investment complement these by enhancing the awareness of stakeholders, press, and developing-country governments of the potential digital trade holds for growth and the risk digital trade barriers and forced localization rules pose for raising prices and reducing the quality of service.

United States-Argentina Global Connect Partnership

The Department of State and the Ministry of Communications of Argentina held two sessions of the U.S.-Argentina Digital Economy Working Group (DEWG): the official launch on August 10, 2016, in Buenos Aires, and a second meeting on November 2, 2016, in Washington, D.C. At the first DEWG session, the two countries announced that Argentina would be a partner country under the Global Connect Initiative and decided to develop a work plan of cooperative activities to help Argentina achieve its connectivity goals.

At the second DEWG session, the United States shared a draft Global Connect Initiative work plan on connectivity with Argentina. U.S. private sector representatives and other stakeholders also participated in the event. The Government of Argentina requested support from the Department of State in carrying out ICT-related reforms. In particular, Argentina has requested help from the U.S. government and industry alike, as well as other stakeholders, regarding the revision of Argentina's underlying telecommunications law and resulting regulations. In a workshop on June 1, 2016, the FCC
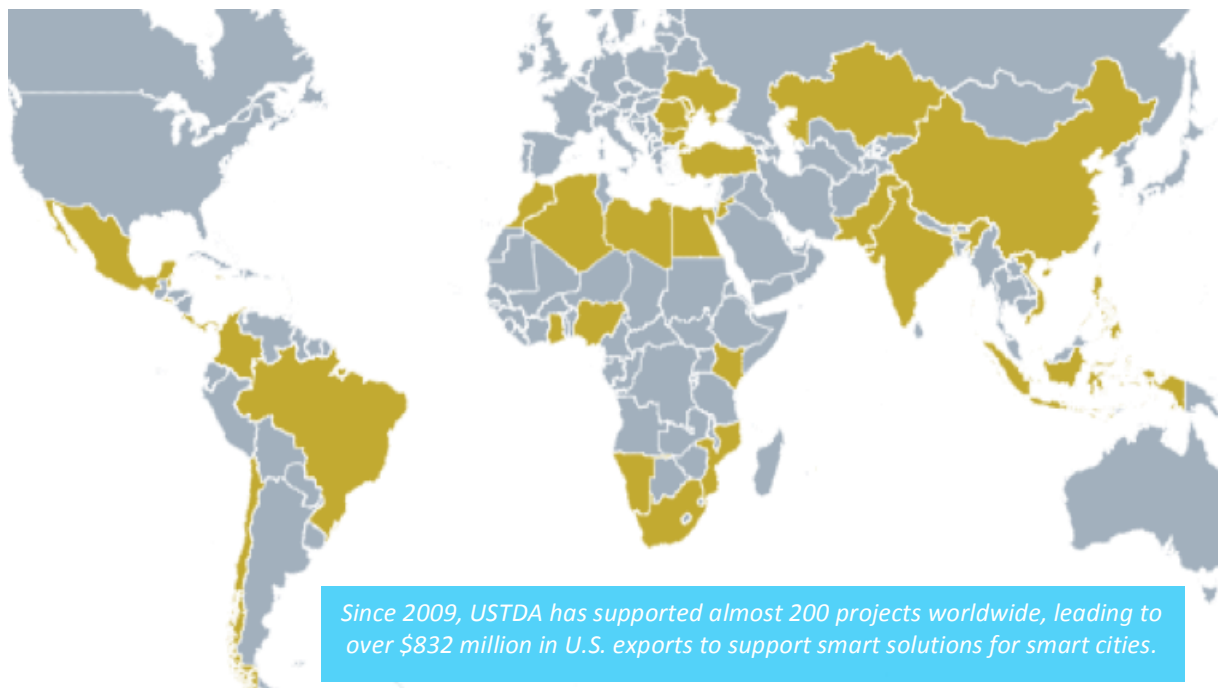
and Department of State provided capacity building in telecommunications regulation, spectrum management, and public advisory committees. Argentina and the U.S. Telecommunications Training Institute (USTTI) also are discussing a memorandum on future capacity building opportunities.

Argentina is seeking to encourage investment in and the development of its broadband infrastructure, particularly in the northern part of the country. The United States and Argentina have discussed how they can work with the Inter-American Development Bank (IDB) and the World Economic Forum on their respective programs aimed at expanding connectivity in Argentina.   The Department of State is supporting Argentina in its attempts to develop a truly open, competitive, and transparent telecommunications sector.

U.S.-Tunisia Joint Economic Commission

At the May 6, 2016, inaugural session of the U.S.-Tunisia Joint Economic Commission (JEC) in Washington, D.C., the governments and private sector stakeholders of both countries made commitments to support initiatives in three key sectors: Agro/Food, Small and Medium Enterprises, and ICT. Based on the Tunisian government's April 14, 2016, expression of interest in partnering with the United States under the Global Connect Initiative, the discussions in the JEC Subgroup on ICT examined ways to work together to achieve the Digital Tunisia 2020 goal of connecting all Tunisians to the Internet in the next four years. Key considerations include increasing foreign investment, identifying collaborative public and private initiatives to build networks, and job creation for Tunisian youth. In this regard, the Department of State has worked with the U.S. government interagency to further explore how the United States and Tunisia can cooperate under the Global Connect Initiative. On October 20, 2016, the U.S. Special Representative to Muslim Communities met with the Tunisian State Secretary for Digital Economy, who expressed the newly elected Tunisian government's interest in implementing strategies and projects to expand Internet access in Tunisia.

U.S.-India Business Council Digital Infrastructure Working Group

Since 2009, USTDA has supported almost 200 projects worldwide, leading to over $832 million in U.S. exports to support smart solutions for smart cities.

In August 2016 the Departments of Commerce and State, together with the FCC and USTDA, participated in a series of meetings as part of the Digital Infrastructure, Innovation and Entrepreneurship Working Group of the US-India CEO Forum. The U.S. delegation engaged with senior officials from the government of India at the federal and state level, including the Telecom Regulatory Authority of India (TRAI) in New Delhi, while major U.S. and Indian companies also participated, including Google, Facebook, Tata, Airtel, American Tower, and Autodesk. Indian officials expressed support for engaging under the Global Connect initiative in order to compliment the Digital India effort to build out broadband and digital infrastructure in India. USTDA offered to hold Global Connect Initiative "reverse trade missions" for interested Indian government officials to Washington, D.C., and/or Silicon Valley, followed by a workshop in India to explore ways that U.S. companies can support India's connectivity goals through export of innovative U.S. technology solutions. The Department of Commerce indicated it would hold another series of digital infrastructure workshops in six months' time and is working closely on this with the Confederation of Indian Industries and the Business Council for International Understanding.

U.S.-ASEAN Digital Economy Series

In September 2016, at the U.S.-ASEAN Summit in Vientiane, Laos, the United States announced a new U.S.-ASEAN Digital Economy Series as the flagship 2017 initiative under U.S.-ASEAN Connect, which is the United States' strategic framework for economic engagement with ASEAN. The Digital Economy Series aims to support ASEAN in tackling the barriers to digital economy development through public-private dialogues, capacity-building workshops and trainings, as well as people-to-people exchanges on diverse topics, including digital entrepreneurship and digital inclusion. The Series builds on existing cooperation under the U.S.-ASEAN ICT Work Plan, which features a pillar on bridging the digital divide. In 2016, the Department of State, with support from the FCC, USAID, and Thailand's National Broadcast and Telecommunications Commission, organized a workshop in Bangkok for over 30 ASEAN engineers and policymakers on spectrum management in support of the Global Connect Initiative and U.S.-ASEAN Connect.

Catalyzing Economic Growth through Broadband Infrastructure in Brazil

In 2015, USTDA signed a Memorandum of Understanding with the Association of State Information Technology Companies of Brazil to create the U.S.-Brazil Information and Communications Technologies Partnership. Through the Partnership, participants are expanding cooperation and exchanging best practices for modernizing information technology and telecommunications infrastructure. Complementing this memorandum, over the last eight years, USTDA has worked in 11 states in Brazil to expand broadband access to citizens across the country. USTDA recently launched a technical assistance project, which will support the expansion of the existing hybrid fiber and wireless broadband network in order to provide connectivity and e-government services throughout the State of Sergipe in northeast Brazil. By expanding that state's existing network, approximately 2.2 million citizens will have digital communication access.

Promoting Wireless Connectivity in the West Bank

On November 19, 2015, Israel and the Palestinian Authority signed a "Principles Agreement" on the assignment of spectrum to Palestinian mobile operators for the deployment of 3G wireless services in the Palestinian Territories. This historic bilateral agreement was recognized in the outcome of the 2015 World Radiocommunication Conference held under the auspices of the International Telecommunication Union (ITU), the UN specialized agency for global telecommunication. The Department of State has been supporting the efforts of both sides to overcome challenges, fully implement the agreement and provide needed access to mobile broadband in the Palestinian Territories.

Engaging Cuba on Expanding Connectivity

Since re-establishment of diplomatic relations with Cuba in December 2014, the Department of State has led two interagency trips to Havana – in March 2015 and January 2016 – to meet with the Cuban Ministry of Communications and other ministries, and learn more about Cuban ICT structure. The U.S. government has used such engagements to discuss ICT's role in Cuba's economic development and productivity.

Arctic Council's Task Force on Telecommunications Infrastructure in the Arctic

Upon designation of the United States as Chair of the Arctic Council in April 2015, the Secretary of State instituted an aggressive two-year campaign that included a new initiative to assess the telecommunications infrastructure throughout the Arctic region. Over the years, various Arctic Council working groups and experts have highlighted many of the shortcomings and difficulties associated with telecommunications connectivity, particularly for broadband, that people working and living in the Arctic must cope with. These connectivity challenges are exacerbated by the Arctic topography and accompanied by increases in human activity throughout the Arctic.

The Arctic Council accepted the agenda put forward by the United States and established a Task Force on Telecommunications Infrastructure in the Arctic (TFTIA) with a two-year mandate to assess the existing telecommunications infrastructure and, where possible, to begin to identify opportunities, such as public-private partnerships, to help overcome any identified shortcomings. All eight member states of the Arctic Council [Canada, Denmark (representing Greenland), Finland, Iceland, Norway, Russia, Sweden and the United States] participated actively in the TFTIA and have prepared their assessment, which will be presented to the Arctic Council Ministers in May 2017.

The Department of State will continue to collaborate with the Arctic Council member states and the telecommunications industry to better identify current opportunities for expanding telecommunications availability in the Arctic, as well as to better understand and assess near-term industry initiatives that will greatly enhance connectivity for residents and businesses in the Arctic. When combined with the imminent industry activities for new connectivity, these efforts should result in significant enhancements to the availability of telecommunications services in the Arctic and greatly enhance the users' experiences.

Prioritizing Connectivity in Development in the Americas Region

The Department of State has worked closely with the Inter-American Telecommunication Commission (CITEL), which, as the telecom arm of the Organization of American States (OAS), is strongly committed to increased connectivity in the Americas, to build international support for the Global Connect Initiative. Last year, CITEL led the way for the Americas region to become the first in the world to formally endorse the principles of the initiative. This year, CITEL is increasing efforts to make connectivity a priority not only for its own activities but also for the OAS more widely.

A loan officer trying out DFS for the first time

(USAID)

Other Multilateral Engagement

U.S. delegates at several high-level forums took the opportunity to promote the Global Connect Initiative among delegates and share information about its relevance to their work. At a May 2016 World Summit on the Information Society Forum coordinated by the ITU and other UN agencies, the Department of State described how the Global Connect Initiative can leverage the efforts and experience of governments, international organizations, industry, technical groups, civil society, and other stakeholders to help connect the next 1.5 billion people to the Internet by 2020. All stakeholders at the event were encouraged to publicly support these Global Connect Initiative goals. U.S. representatives gave similar presentations at the June and November meetings of the Asia Pacific Economic Cooperation's Telecommunications Working Group and at the Organization for Economic Cooperation and Development's November 2016 meeting of its Working Party on Communication Infrastructures and Services Policy. Following these presentations, representatives from several delegations made follow-up inquiries about how they could participate.

Other Bilateral Engagement

The Department of State has explored deeper cooperation under the Global Connect Initiative with other bilateral partners in a series of dialogues and discussions, including the U.S.-Japan Internet Economy Dialogue, the U.S.-EU Information Society Dialogue, the U.S.-Korea ICT Policy Working Group, the U.S.-India ICT Working Group, and the United States' Dialogue Partnership with ASEAN Telecommunications Senior Officials.

FINANCING CONNECTIVITY

Investment in infrastructure is an essential component of any strategy to expand connectivity. U.S. financing for such investment and other assistance to expand connectivity has had a substantial impact on efforts to bridge the digital divide. Private sector partners have received financing from the OPIC for initiatives in India, Myanmar, and Kenya, which are bringing new wireless access to the unconnected. The Departments of State and Treasury have also worked closely with MDBs to encourage increases in development financing for connectivity initiatives and to promote the idea that connectivity goals should be taken into account during the construction of other infrastructure through approaches such as a "dig-once" policy.

U.S. Lending for Connectivity Infrastructure

OPIC officials meet with the team at Apollo Towers who are building the infrastructure to bring mobile connectivity to rural Myanmar.

Six investments have been supported by OPIC since the launch of the Global Connect Initiative, including up to $171 million in financing to Tikona Digital Networks in India. This supports the expansion of Tikona's low-cost, rapidly scalable wireless broadband networks across India, which lacks widespread broadband service availability. Recent studies show that increased broadband penetration is linked to GDP growth in developing countries. OPIC support to Tikona will promote Internet adoption among residential and commercial consumers in India and advance this critical foundation for economic and social development.

OPIC also approved a loan for Apollo Towers Myanmar, Ltd. in Myanmar for up to $250 million in financing. Apollo Towers will use an OPIC loan for the development of a network of 2,500 telecommunications towers across Myanmar, one of the last places in the world without widespread infrastructure for this technology. Only three percent of Myanmar's 50 million residents had access to

mobile phones in 2011. OPIC's support to Apollo Towers is expected to create the infrastructure that will contribute to a goal of 75% mobile access for Myanmar's people by 2016. In addition to bringing widespread information access to millions of people, OPIC's support to Apollo Towers will provide a valuable demonstration effect for development in this newly opened market.

Up to $4.1 million in financing is being lent by OPIC to Mawingu Networks, a provider of solar-powered wireless Internet across rural Kenya. A press release from OPIC describing the program can be found here.

Other U.S. Support for Connectivity Financing

Inspection of the newly installed electrical submarine cable at its emergence along the shores of Zanzibar. The Millennium Challenge Corporation increased electrical infrastructure on the Zanzibar Archipelago by bringing the new cable from mainland Tanzania, constructing new electrical sub-stations and installing new power lines.

(Millennium Challenge Corporation – Zanzibar, Tanzania – October 29. 2012 – Photo by Jake Lyell)

The OPIC-supported Siraj Palestine Fund I, a private equity fund, recently made an investment in AppMahal Tech Ltd. Its product, also called "AppMahal," is a smartphone application that helps Arabic language speakers discover and share new apps by using a social network to collect data, which it feeds into an algorithm that predicts which apps might interest the user most. The application aims to become the "Facebook of mobile applications." AppMahal is currently available for Android phones, and it has been downloaded in excess of one million times since 2014. AppMahal currently focuses on Arabic-speaking markets, with a plan to eventually target other markets, such as Spanish-speaking markets.

OPIC also supported the recent investments by Unitus Impact's Livelihood Impact Fund (LIF) in mobile technology companies – iCare Benefits and PT RUMA. iCare Benefits is a Vietnamese online retailer targeting low-income factory workers in medium-to-large-sized companies. iCare Benefits partners with large employers and employee unions in Vietnam to market its innovative e-commerce and electronic transaction processing platform that sells goods and services using low-cost installment finance to low-income Vietnamese workers. Through iCare, Vietnamese factory workers can access an online platform that sells goods and services delivered through a network of iCare centers, storefront locations at or near partner factories. PT RUMA is an Indonesian retailer that sells a selection of products and services via an Android and SMS-based platform, using a network of small shopkeeper agents. Mapan, Ruma's stored value product, allows customers to save and purchase products from a catalogue. Established in 2009, Ruma markets its program both to low-income shopkeepers, who

receive business trainings and additional income through the sale of Ruma products, as well as to low-income customers, who gain improved and lower-cost access to products and services. Products and services offered by Ruma's platform include electronics, housewares, apparel and prepaid cell phone airtime.

In April 2016, the Export-Import Bank of the United States (EXIM) hosted at its Annual Conference a panel discussion focused on the Global Connect Initiative that featured the Under Secretary of State for Economic Growth, Energy and the Environment.. EXIM also encouraged applications for, and maintained frequent communication with, major U.S. exporters of satellites, satellite launch services, submarine fiber optic cables, and other communications equipment and services throughout 2016. However, the lack of a quorum on EXIM's Board of Directors throughout fiscal year 2016 prohibited approval of transactions valued at more than $10 million. While EXIM was able to complete smaller transactions totaling $40 million related to connectivity, mostly in support of U.S. small business exporters, EXIM's ability to support even more U.S. jobs and exports for projects in the markets of Global Connect Initiative partner countries was significantly curtailed in 2016.

Outreach to Multilateral Development Banks

The Global Connect Initiative drew swift, high-level support from many of the multilateral development banks (MDBs), most from notably the President of the World Bank, who co-hosted with the Secretary of State a high-level event attended by finance and development ministers and international leaders of business and industry. To continue the momentum, the Departments of Treasury and State co-led the Steering Group's efforts to advance partnerships with MDB stakeholders ensuring a coordinated, consistent, and inclusive interagency approach to identifying strategies for fostering partnerships with MDBs on international connectivity endeavors. This also included advocating for MDBs to make ICT and connectivity advancement an integral part of their policies, projects, and operations.

The Department of State engaged with MDBs directly to advance the Global Connect Initiative by supporting increased lending for connectivity and advocating for policy changes to raise the profile of connectivity. For example, the Department of State promoted cross-departmental discussion of connectivity within the World Bank spanning regional bureaus, the Transport and ICT Global Practice Group, and the External and Corporate Relations Department. As a result, World Bank officials identified the need for a policy change to better account for Internet connectivity in the World Bank System Country Diagnostic process. The Under Secretary of State for Economic Growth, Energy and the Environment held two important meetings with regional development banks: one with the President of the European Bank for Reconstruction and Development to advocate for the Global Connect Initiative and digital economic development and another with President of the Inter-American Development Bank (IDB) to express appreciation for IDB's leadership in connectivity and encourage even more financing. The Department of State provided input to the IDB on its Argentina Country Partnership Strategy for 2016-2019 to take into account Internet connectivity as a constraint to growth. The Department of State also held discussions with the African Development Bank to advance connectivity by exploring how we can work together on connectivity challenges in Africa, including an October 28, 2016, meeting at the Bank's headquarters in Abidjan.

The European Investment Bank (EIB), a Global Connect Initiative Stakeholder, signed a EUR116 million loan agreement with El Corte Inglés in Spain to finance the company's digital transition; El Corte Inglés will use this EIB financing to expand the investment needed to provide its customers with a new integrated online retail platform, enabling it to strengthen its multichannel online and mobile sales, and create efficient synergies with its brick-and-mortar stores. (Note: the United States is not a member of the EIB.)

Support for Multilateral Development Bank Connectivity Projects

The United States also supported the following MDB projects with significant connectivity elements:

• The Panama Online Program, a $22 million IDB project to ensure that efforts to make government services available online benefit citizens living in poverty.

• The Virgin Mobile Peru project, a $13 million World Bank-International Finance Corporation operation for Virgin Mobile to provide prepaid mobile services – voice, messaging and multimedia – as well as innovative data plans to its clients.

• The WaveCatcher program, a $40 million World Bank-International Finance Corporation operation to support the design, construction, and operation of a nationwide independent wholesale mobile broadband network in Mexico to provide IP connectivity services to mobile network operators, mobile virtual network operators, and mobile services providers.

• The Tosca project, a $23 million European Bank for Reconstruction and Development operation to introduce new technology and the expansion of communication networks in both the fixed-line and mobile segments in Kosovo, thereby increasing broadband coverage and penetration.

• The eGabon project, a $56 million World Bank operation to improve the timeliness and availability of information to support the delivery and management of public health services and foster the development and roll-out of e-health applications and services.

• The India Think and Learn project, a $13 million World Bank-International Finance Corporation operation to support Think and Learn Pvt. Ltd., an Indian supplier of online and mobile-based educational content for primary and secondary students.

• The Telecommunications Tower Infrastructure Project for Myanmar, a $50 million Asian Development Bank operation to support the rollout of up to 5,000 towers nationwide that are essential in enabling telecommunication operators to provide a full range of mobile and data services in Myanmar.

IMPLEMENTING DEVELOPMENT ASSISTANCE

USAID and other agencies also provide direct assistance to foreign governments in expanding connectivity. Such assistance has addressed both "supply side" needs, such as technical assistance in the development of national broadband plans, and "demand side" needs, for example, with digital literacy programs. Other assistance initiatives undertaken by U.S. agencies have sought to address the gender gap in Internet access and to preserve and restore connectivity after natural disasters.

Many, if not most, mobile device users in Yangon have embraced the smartphone or tablet devices (Yangon, Myanmar, USAID)

Global Broadband and Innovations Program Projects

Liberia

In 2014 and 2015, Ebola cost Liberia thousands of lives and hard-earned development and economic gains. Internet access is vital for disease surveillance and health information systems to detect and prevent future outbreaks of Ebola and other diseases. The U.S. government is helping Liberia rebuild stronger than before to prevent and detect future outbreaks.

As part of this work, USAID is working closely with the Liberian government to strengthen the country's telecommunications sector. Liberia is among the world's least connected countries. Investments in connectivity open up possibilities for telemedicine and mHealth (mobile health) in a country with tremendous health care worker shortages. Improved connectivity also has the power to improve communications between the Ministry of Health, health care workers, and communities to help detect and stop future outbreaks before they start.

USAID's work supports the Liberian government in its vision to modernize the country's information communications technology policies and regulatory capabilities, in collaboration with partners such as the Alliance for Affordable Internet and the Global Broadband and Innovations Alliance. Through this work, the Liberian government has made a strong commitment to advance market conditions that foster open and affordable access for Liberian citizens and businesses.

In addition, USAID is partnering with the private sector to expand communications infrastructure in Liberia, including co-investments with a local telecommunications provider to connect peri-urban and rural health and education facilities, as well as working with Google and the Government of Liberia to bring high-speed communications infrastructure to the country's capital city of Monrovia. As part of this partnership, Google will offer reduced rates for government, medical, and educational facilities. Through public-private partnerships, USAID unlocks investment into sectors that are important for development through co-investment with the private sector at a 1:1 level or greater.

Building on these activities, USAID has provided an additional $10 million to support connected programs like health information systems, e-government, and expansion of digital financial systems. It also supports local digital entrepreneurs by providing access to a USAID loan guarantee program for qualified small and medium-size businesses.

Indonesia
Over the past two years, the Indonesian government and Microsoft have connected more than 800 remote towns and villages to the Internet, building on the success of a multi-year partnership with USAID and NetHope, a non-governmental organization (NGO) which joins the world's largest nonprofits with technology innovators worldwide.

This partnership began with the design of Indonesia's National Broadband Plan, which was announced in 2014. USAID and NetHope teamed with the Indonesian government to build consensus and set strategic priorities across ministries and the private sector in the creation of this plan. The partnership team, composed of local and international specialists, developed the framework for gathering input on the plan and interviewed stakeholders across government reform, health, education, logistics, and procurement sectors.

Following on the design of this National Broadband Plan, USAID, the Indonesian government, and NetHope identified TV white space technology as a particularly useful technology for connecting Indonesia's remote islands to the Internet. Throughout 2014 and 2015, USAID and NetHope successfully piloted the technology in the Yogyakarta region of Java, and its success has led to the government of Indonesia's current efforts to scale the technology to 1,600 communities across the country.

The Indonesia Broadband Plan and the Indonesian government's connectivity efforts are expected to unlock $23 billion in investments and connect up to 100 million Indonesians, 40,000 schools, and 5,000 health clinics to the Internet by 2019.

Botswana
In partnership with a broad consortium of partners (Microsoft Corporation, the Botswana Innovation Hub, Global Broadband Solutions, Vista Life Sciences, Botswana Fibre Network, University of Pennsylvania, Vista Life Sciences, and NetHope), USAID launched Project Kgolagano in 2015. Through the project, TV white space wireless technology is used to connect patients in rural areas of Botswana with medical specialists located in more urban areas. The project, which focuses specifically on maternal health, is currently operating in hospitals and clinics in Lobatse, Francistown, and Maun, with the hope of expanding to other locales.

Jamaica
In 2015 and 2016 USAID partnered with NetHope, Microsoft, FLOW, and the Jamaican Universal Service Fund to bring cutting-edge TV white space wireless technology to 31 schools, libraries, and other community locations in rural areas around Jamaica. NetHope and Microsoft continue to provide oversight and technical support for the pilot and are working to leverage other education and community-focused technology grants and projects for the newly connected locations. The pilot builds upon the Vision 2030 Jamaica National Development Plan, which, among other things, focuses on expanding affordable broadband into rural communities.

Kenya

From 2013 to 2015, USAID partnered with Microsoft to provide seed funding to Mawingu Networks, a Kenyan startup utilizing cutting-edge TV white space wireless technology and low cost solar power to provide broadband Internet to remote, rural communities in Kenya. This seed grant helped enable Mawingu to establish its business model with a pilot program in Laikipia County. As a result of the success of this pilot program, OPIC announced a $4.1 million dollar loan guarantee in September 2016 to enable expansion of Mawingu's network across rural Kenya. In addition, the demonstration of Mawingu's business model has led to the investment of venture capitalists, including Paul G. Allen's Vulcan Inc., in expanding the network's reach beyond its current 300 hotspots.

Mawingu Wifi Affordable Internet (Nanyuki, Kenya, USAID)

Philippines

Since 2013, USAID has brought expanded Internet connectivity to rural areas of the Danajon Reef in the Philippines as a part of the "ECOFISH" program, which focuses on empowering communities to report illegal intrusions into Marine Protected Areas with new technology. Over the past three years, through a partnership with NetHope and Microsoft, the Philippine government has connected schools and community centers in six remote municipalities to the Internet via TV white space, benefitting more than 250,000 people.

Closing the Digital Gender Divide

Gender Digital Divide Assessment and Education Tools

USAID's Digital Inclusion team has developed a series of new tools, set to launch in early 2017, focused on the gender digital divide. One of the primary issues preventing effective policy action to address the gender gap in access and usage of mobile devices and Internet is the lack of high-quality, standardized data on the problem. To this end, USAID has been working over the past year to develop a survey toolkit designed to allow NGOs, governments, and academics to collect standardized and actionable data on the gender digital divide. This toolkit will be available in early 2017. In addition, USAID has partnered with FHI 360's mSTAR program to develop two training programs – one online and one in-person – that explain the fundamental issues of the gender digital divide and help field staff think through potential policy and programmatic solutions. These programs will be available for the public in early 2017, alongside the survey toolkit.

mWomen

In 2015, the mWomen project, a partnership between USAID, the Australian Agency for International Development, the GSM Association, and Visa, successfully concluded its work focused on closing the

gender gap in access to mobile phones and the services they can provide. Over the past four years, this partnership has focused on four main pillars of activity. First, mWomen provided human resource grants to mobile operators to implement commercially viable and socially responsible offerings for women. Second, as a complement to this, mWomen provided grants for NGOs to collaborate with mobile operators in designing activities that address the barriers to mobile phone usage among women, particularly technical literacy and traditional attitudes surrounding women's ownership of mobile phones. Third, mWomen conducted research into women's wants and needs, including for mobile value-added services, such as mobile payments. Fourth, mWomen has promoted the sharing knowledge and replication of best practices throughout the mobile industry and development community through the publication of numerous high-profile reports.

Data2X

The Millennium Challenge Corporation (MCC) partnered with Data2X, a UN Foundation initiative whose goal is to increase the availability and quality of gender data. Through its commitment to the partnership, MCC completed three activities to increase quality availability and use of gender data: 1) MCC led as the first agency to upload its own sex-disaggregated data to the International Aid Transparency Initiative (IATI) standard website and published a blog post about the internal lessons-learned from releasing its sex-disaggregated data; 2) MCC hosted a workshop that generated recommendations for how IATI could be a better platform for donors and users of gender data worldwide; and 3) MCC organized a first-of-its-kind gender data competition in MCC partner country Côte d'Ivoire that brought local civil society and government actors together with Ivoirian technical teams to design websites, applications, and tools that use or collect data to support women's and girls' health, education, and safety. This competition helped foster a gender data ecosystem in Côte d'Ivoire, and stimulate interest and activity between the gender issues and technology communities.

Fiber Optic Expansion in Brazil

USTDA brought a delegation of Brazilian officials to the U.S. to explore how cloud computing could advance connectivity across Brazil. The delegation explored technologies, service providers and U.S. companies, like Google, that could help advance their efforts.

In June 2016, USTDA provided a grant to assist the Brazilian State of Pará design the expansion of its fiber optic network. Pará is Brazil's second largest state in area and most populous in the northern region. Currently, nearly half of Pará's citizens have access to a high-speed IT communication networks. The goal of the technical assistance is to identify the technologies best suited to increase the reach of high-speed Internet service to the maximum number of citizens in the Amazon region, which includes dense tropical forests and uneven terrain divided by major rivers. The project will also provide recommendations for creating free broadband access through public telecenters and schools.

Connecting Citizens with Smart and Sustainable Infrastructure in India

USTDA's Smart Solutions for Smart Cities Initiative utilizes U.S. private sector expertise to deliver infrastructure advisory and project preparation services to support the Indian government's goal of building 100 smart cities across India through the "Smart Cities Challenge." Through this initiative, USTDA is helping three Indian state governments identify U.S. solutions that can help them build smart, connected and sustainable infrastructure in the cities of Allahabad, Ajmer, and Visakhapatnam.

Since the launch of the Global Connect Initiative, there has been demonstrable progress connected to USTDA's smart cities work in India. Visakhapatnam was selected in the first round of the Challenge in January 2016. As a result, USTDA's technical assistance is focused on developing an integrated smart cities master plan to help the city implement its smart cities vision. Among many of its goals, Visakhapatnam seeks to be one of the top five digital cities in Asia. Accordingly, USTDA's technical assistance is preparing an ICT architecture blueprint to prepare for long-term growth with recommendations for near-term investments to enhance connectivity for the public and improve the efficiency of city services.

In Ajmer, USTDA's Technical Advisory Team worked closely with city officials to help them succeed in the second round of the Challenge in September 2016. Going forward, USTDA will continue to work with Ajmer as it develops a robust ICT connectivity and digitalization framework to achieve its smart cities' vision. In addition to increased e-citizen services, Ajmer plans to implement free secured Wi-Fi and Internet kiosks in its downtown for public use by its 2.5 million citizens. The Wi-Fi also will serve as the communication backbone for city services and data input to a central operations center.

Restoring Connectivity during Emergencies

When major international disasters strike, an increasingly coordinated cadre of international organizations, NGO's, and industry players work to preserve and restore connectivity in affected areas for response and recovery. Wherever possible, the Department of State and other relevant agencies seek to enable these efforts.

In July 2016 the Department of State co-led an assessment mission to Haiti with the UN Emergency Telecommunications Cluster (ETC) designed to help the ETC develop a process to support developing countries that are vulnerable to disasters in building-up emergency communications response capacity and increasing communications network resilience. When Hurricane Matthew battered the Southern Claw of Haiti in October, the Department of State and the FCC immediately linked key Haitian contacts

with communications response entities, offering technical assistance. This legwork helped the UN World Food Program (WFP), which leads the ETC, to convene the Haiti ICT Working Group. The working group coordinated with the government, private sector, and humanitarian partners on the ground, providing shared Internet connectivity services at key humanitarian response sites. WFP is further assessing community connectivity needs and contributing to inter-sectoral plans for increased community engagement.

Within CITEL, the Department of State co-authored a joint resolution with the Dominican Republic in May 2016 that called for the creation of a Preparedness Coordinating Group on Emergency Communications for the Americas. The Department of State and the FCC will assist the creation of this group, which will identify aspects of emergency communications preparedness and response for further capacity building and training and create emergency preparedness and response groups among CITEL member states.

In September 2016, the Department of State, with support from the FCC, helped the ITU's Development Sector (ITU-D) organize a "Workshop on Emergency Telecommunications and Disaster Relief," in Geneva, Switzerland. The Workshop brought together a diverse group of stakeholders, including governments, industry representatives, UN organizations, technology associations, and NGOs to share best practices for enabling the use of ICTs for disaster risk mitigation and response."

PEPFAR/Data Collaboratives for Local Impact

Students study using new laptop computers at Olukolo Junior Secondary School in Ondangwa, Namibia. As part of the MCC-funded renovation and expansion of Olukolo, students received new classroom blocks, access to clean water, laboratory and computer equipment and new textbooks.

(Millennium Challenge Corporation – Namibia – March 10, 2014 – Photo by Jake Lyell)

MCC has entered into a partnership with the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), known as the Data Collaboratives for Local Impact (DCLI) program, to invest $21.8 million in a set of interconnected projects at the national and subnational levels to engender greater capacity to use data

in sub-Saharan Africa. By 2018, this PEPFAR-funded DCLI program seeks to demonstrate practical and effective uses of data – by governments, citizens and others stakeholders – for policy-making, data-driven decision-making, mutual accountability, transparency, and greater alignment of budgets with local and national priorities.

In Tanzania, DCLI has already established a data lab (dLab), which, along with the Global Data Partnership, has sparked the government's interest in using data to make better decisions and drive progress toward the UN Sustainable Development Goals (SDGs). The dLab has launched online and in-person training in data literacy and analysis as well as focused content-area data analytics in health, agriculture, and other priority areas. The Data for Local Impact (DLI) Innovation Challenge project aims to strategically surface, engage, support, and connect local innovators, entrepreneurs, and others working to demonstrate the value of data and information in priority PEPFAR districts. The first DLI challenge competition is underway; it is focused on the health sector and looking for innovative ways that data can enable access to health care and information, empower citizens through information, and stimulate feedback from the community on service availability and quality. Through multiple rounds of competitions, the DLI project will respond to local and national priorities and complement efforts of the dLab. The DCLI program will be launching a third project, Data-Driven Communities, to extend this effort to the subnational level (district and ward level), where development needs are greatest and capacity of stakeholders, including local government officials, smaller NGOs and communities, to use data is weakest.

Business Models for the Last Billion

In 2016, USAID, FHI 360's mSTAR project, and SSG Advisors released the report *Business Models for the Last Billion: Market Approaches to Increasing Internet Connectivity.* This report highlights low-cost business models and technology that can be utilized in seeking to connect populations in the most rural and impoverished areas of the world, including developments in back-haul network infrastructure, Internet service provider business model innovation for providing service to those in the base of the economic pyramid (BOP), the rise of low-cost Internet access devices, locally relevant content, complementary services offered to BOP customers (such as charging stations), and effective policy and regulation to extend service to populations without it.

BUILDING CAPACITY ON TECHNICAL AND REGULATORY BEST PRACTICES

Among the most critical needs in expanding connectivity is a policy and regulatory environment that encourages investment in infrastructure and innovative solutions to providing affordable access. The FCC and other U.S. agencies have implemented capacity building that has shared U.S. experiences and best practices in developing regulatory approaches that foster competition and attract investors. The U.S. Telecommunications Training Institute, a public-private partnership with support from the Department of State, has played an important role in providing capacity building to telecommunications officials around the world.   Capacity building activities by Steering Group member agencies have included the following:

Federal Communications Commission (FCC)

International Visitors Program
The FCC International Visitors Program (IVP) was established in l993 to provide legal, technical, and economic perspectives on U.S. telecommunications regulations to policy makers from around the world visiting the FCC headquarters in Washington, D.C. The IVP conducts an average of 400-500 such briefings per year. Since September 2015, the FCC hosted 382 visitors from 67 countries, providing technical and policy information generally on topics including national broadband plans, universal service, spectrum management, and emergency communications.

The FCC regularly holds bilateral exchanges and provides presentations at the national, regional, and global level to promote regulatory best practices that would help advance broadband connectivity around the world.

Argentina
In June 2016, the FCC conducted a workshop in Argentina on U.S. general regulatory practices that promote competition and ICT growth. The workshop also covered best practices for spectrum management and media regulation. The training was attended by nearly 50 Argentine policy makers and officials, including some from the Ministry of Communications and the new telecom regulatory agency, ENACOM.

ASEAN
In October 2016, the FCC – in coordination with USAID and the Department of State – developed and facilitated a three-day multi-stakeholder spectrum management training workshop in Bangkok organized under the umbrella of U.S.-ASEAN Connect. Thirty-five representatives from eight ASEAN member states participated in the workshop. FCC subject-matter experts led interactive sessions on topics including frequency allocation and licensing, spectrum auctions, spectrum sharing, and frequency planning for future mobile technologies. The workshop also featured a private-sector panel with representatives from Adaptrum, Cisco, Facebook, and NetHope.

Department of State

India

In August 2016, working with the Business Council for International Understanding, the Department of State participated in an interagency group of experts, including those from National Telecommunications and Information Administration and the FCC, who shared best practices and lessons learned on broadband infrastructure deployment and digital inclusion in a series of digital infrastructure best practices workshops. The workshops were part of the Department's work in Digital Infrastructure, Innovation and Entrepreneurship Working Group of the U.S.-India CEO Forum, which is included in the U.S.-India Strategic & Commercial Dialogue (S&CD). The best practices workshop took place in three cities across India: New Delhi, Visakhapatnam and Jaipur. Nearly 150 representatives from government, industry, and academia participated in the workshops, facilitating exchange regarding a wide range of policy best practices for deploying sustainable broadband networks to support digital infrastructure and improving digital inclusion efforts.

On October 25-26, 2016, the Department of State hosted the "Global Connect Initiative: Technology Leadership Program Network Security Workshop" at the American Club in New Delhi. The event brought together representatives from U.S. government agencies, U.S. telecommunications companies, and the Indian Department of Telecommunication for substantive discussion on federal communications regulation and network security best practices.

Socializing DFS to the cooperative members (USAID)

Technology Leadership Program

The Technology Leadership Program (TLP) provides technical assistance and builds institutional capacity to reform the telecommunications policies and practices in USAID-assisted developing countries. TLP's primary goal is to help developing-country governments establish fair, transparent, and market-oriented telecommunications policies and practices. The program's secondary goal is to help both the public and private sectors in developing countries use telecommunications more effectively to spur economic growth, strengthen democratic institutions, and improve standards of living. TLP provided funding to support several of the capacity-building workshops described above.

U.S. Telecommunications Training Institute

The United States Telecommunications Training Institute (USTTI), a government-industry partnership, provides in-depth technical and regulatory training to emerging and established policymakers from developing countries around the world. It is internationally recognized as a center of excellence for training ICT professionals, regulators and entrepreneurs throughout the developing world. The Department of State has provided funding to USTTI to support a USTTI Grant Program that will provide technical assistance and build institutional capacity in developing countries to reform their ICT policies and practices and train policy officials and leaders. Funds will support travel and associated costs for developing country participants. For 34 years, the U.S. government and industry have provided ongoing tuition-free telecommunications courses and seminars under the auspices of the USTTI. In 2016, USTTI graduated 224 officials from 64 developing countries from training courses in topics such as spectrum management, Internet technology and policy, telecom regulation, and cybersecurity.

DEVELOPING STAKEHOLDER PARTNERSHIPS

The Global Connect Initiative has been a multi-stakeholder initiative since its founding and is based on the idea that every type of stakeholder has a role to play in bringing the next 1.5 billion people online by 2020. Many of the accomplishments of the Initiative spring directly from partnerships with private sector companies, international organizations, and civil society. Further developing such partnerships will continue to be a critical part of the Steering Group's strategy.

Institute of Electric and Electrical Engineers Stakeholder Conferences

The Department of State supported the Institute of Electric and Electrical Engineers (IEEE) in its work to organize and host three Global Connect Initiative stakeholder conferences in 2016: April 13 in Washington, D.C.; September 15 in Delhi, India; and October 5-6 in Washington, D.C. In collaboration with the Internet Society, People Centered Internet and World Bank Group, IEEE convened leaders from governments, MDBs, industry, the technical community, non-governmental organizations, and civil-society organizations. The conferences explored technical, financial, and policy options for addressing infrastructure challenges and extending affordable Internet access in underdeveloped and underserved communities and regions worldwide. A blend of dynamic, interactive workshops and panels, lightning talks on the status of digital inclusion plans, and regional and thematic roundtables involving dozens of speakers from different disciplines and markets provided an overview of the globally joined effort to connect the next billions of people. Participants organized into "thematic roundtables" in order to prioritize next steps and commit to action items toward making progress in extending affordable Internet access.

Panel discussion at Internet Inclusion: Global Stakeholders Advancing Solutions held in Washington, D.C. (IEEE)

Inter-American Development Bank and World Economic Forum Project

The United States and Argentina are working with the Inter-American Development Bank (IDB) and the World Economic Forum (WEF) on their respective programs aimed at expanding connectivity in Argentina. The initial joint meeting of the IDB and the WEF was held on November 10, 2016 in Buenos Aires with participation by the Department of State. At that meeting the WEF introduced its Internet for All project to stakeholders in Argentina, the objective of which is to facilitate partnerships, including public/private, multilateral/bilateral, and non-profit, in order to close the digital divide. Argentina was selected by the WEF as the location for its second Internet for All project.

At the meeting, the IDB discussed its technical cooperation program with Argentina as part of a greater regional strategy in Latin America to develop the creative economy by means of four key levers: (1) improving the fundamentals of the ICT Industry; (2) expanding investment in ICT convergence; (3) reinforcing global cooperation in particular between governments, private sector, civil society, and academia; and (4) nurturing the following four major strategic areas – infrastructure, affordability, skills and awareness, and content. While part of a regional strategy, country specific work for Argentina will be developed by the IDB in conjunction with all stakeholders. The Republic of Korea's Ministry of Science, ICT, and Future Planning is a major donor to this program.

Alliance for Affordable Internet (A4AI)

USAID is the largest funder, and a founding member, of the Alliance for Affordable Internet (A4AI), a consortium of public, private, and civil society organizations focused on ensuring affordable access to the Internet for all. In 2015, A4AI issued an expanded international affordability report focused on the state of Internet affordability in 51 countries, with special emphases on poverty, income inequality, and gender inequality. In addition to its annual affordability report, A4AI briefs governments around the world on Internet accessibility policy and assembles multi-stakeholder coalitions focused on bringing down the cost of Internet access in six target countries: the Dominican Republic, Ghana, Liberia, Mozambique, Myanmar, and Nigeria. These coalitions are composed of leading representatives from the public sector, private sector, civil society, and academia and seek to identify the major obstacles preventing affordable Internet access in focus countries and work jointly to tackle those issues. To support and advance the Global Connect Initiative, A4AI announced the creation of a working group on ICT investment by multilateral development banks with key stakeholders and experts. The working group will primarily focus on the work done by the multilateral development banks, both in terms of their direct resource commitment as well as facilitation of policy reforms and technical assistance to unlock greater private investment.

Closing the Digital Divide in the United States

In the United States, promoting broadband is a top national priority, with special emphasis on closing the remaining digital divide. While over 95 percent of American households with incomes of $150,000 or more have access, only 48 percent of those making less than $25,000 have service at home. Only one in ten Americans lacks access to 25 Mbps/3 Mbps broadband, but more than 39 percent of rural Americans and 41 percent of Americans living on Tribal lands lack such access. To close this divide, the FCC, the Department of Commerce's National Telecommunications and Information Administration (NTIA), and the Department of Agriculture and other federal agencies have implemented programs aimed at making broadband or high-speed access to the Internet available to all Americans:

•   In March 2016, the FCC reformed its Lifeline program for low-income Americans, phasing in minimum standards for mobile broadband of 2 GB per month by 2018.

•   The FCC's E-rate program has provided funding for broadband and Wi-Fi to 245 tribal schools serving over 60,000 students and 31 tribal libraries in the last funding year alone.

•   In August 2016, the FCC adopted new rules to require that 88 percent of wireless phones be hearing aid compatible within five years.

•   NTIA's Broadband Technology Opportunities Program (BTOP) and BroadbandUSA program, launched in 2015, have helped bridge the technological divide. Under the BTOP grant program, NTIA invested $4 billion in 230 projects nationwide that built critical broadband network infrastructure, opened or upgraded public computer centers, and established broadband adoption and digital inclusion programs. Through its BroadbandUSA program, NTIA is helping to expand broadband infrastructure and improve digital literacy across America. Broadband USA has created a variety of solution-neutral broadband guides and tools, provided direct (one-to-one) technical assistance to over 120 communities in more than 34 states, and hosted seven regional events focusing on connecting more than 600 community leaders with peers, industry experts and timely guidance to advance their broadband efforts.

•   The Department of Agriculture plans to award up to $11.7 million in grants for underserved rural communities in 2016 through its Community Connect program, part of a broader effort that has helped bring high-speed Internet access to nearly six million rural residents since 2009.

FUTURE STRATEGIES AND ACTION

As directed by the Executive Order, U.S. agencies have examined future strategies and plans for action in support of expanding Internet connectivity globally in line with the goals of the Global Connect Initiative. Each agency has considered how it can better leverage its own resources to expand connectivity, and the Steering Group will continue to work to improve coordination of these efforts. This report will provide a resource to identify areas of potential cooperation between agencies with complementary programs addressing the same markets.

The Steering Group will continue to work with partner countries including Argentina, Liberia, and India in support of their respective goals to expand connectivity. Steering Group agencies will continue to engage multilateral and regional organizations such as the ITU, UN Broadband Commission, OECD, G-7, G-20, EU, and ASEAN, among others.

The Steering Group will take advantage of important events in 2016 to further build global momentum, including the Global Connect High Level Event and World Bank-supported conferences organized by the IEEE. The Steering Group will continue to work with stakeholders such as IEEE, the Inter-American Development Bank, the World Economic Forum, and others to further catalyze action by the private sector, civil society, and other international institutions.

As new data becomes available, the Steering Group will regularly assess the effectiveness of its actions and update its information. The Steering Group will continue to identify gaps and improve coordination of U.S. government connectivity efforts to close the digital divide.

Future strategies identified by Steering Group member agencies include the following:

Department of State

By continuing and extending engagement with multilateral and regional organizations, the Department of State will further expand and deepen support for the Global Connect Initiative. In addition, it will seek to identify new partner countries with the goal of developing focused interagency action plans for coordinated and comprehensive bilateral work to support the partner country's connectivity goals. The Department of State will continue to convene the Global Connect International Connectivity Steering Group and, in collaboration with other federal agencies, will pursue further analytical work to better understand and quantify the impact of connectivity on economic growth and development.

USAID

Building on recent successful projects, USAID is committed to more broadly and deeply integrating connectivity into the way the agency does development programming – to reach more people more efficiently and effectively while also creating a foundation for macroeconomic growth. In addition, the Digital Inclusion team will be working with a number of USAID Missions to incorporate connectivity into their Country Development Cooperation Strategies, which set Mission development strategies and goals for the next five years. The first steps of this deeper commitment can, for instance, be seen in USAID's preparations over the past year in Liberia and Uganda. In response to the Ebola crisis in Liberia, USAID

will launch five connectivity-related projects focused on strengthening the country's health sector over the next year. In August 2016, USAID's Digital Inclusion team supported assessments of communications infrastructure for Feed the Future in rural Uganda, and is currently working with the USAID Mission in Uganda to operationalize connectivity interventions identified as part of the assessment. In addition, the Digital Inclusion Team will be working with a number of Missions to incorporate connectivity into their Country Development Cooperation Strategies, which sets each Mission's development strategy and goals for the next five years. Finally, under the Internet for All Project, the Digital Inclusion team, in collaboration with the Kenya and East Africa USAID Mission's Regional Economic Integration Office, has been working with the Northern Corridor Integration Project and World Economic Forum to develop supportive policy for last mile connectivity, spectrum management, and reduced cost broadband backhaul in the four Northern Corridor Countries of Kenya, Uganda, Rwanda, and South Sudan. These kinds of efforts will become more widespread over the coming years as USAID continues to pivot towards integrating connectivity into USAID programs as a foundation for meeting development objectives.

In response to the Ebola crisis in Liberia, USAID will launch five connectivity-related projects focused on strengthening the country's health sector over the next year. In August USAID's Digital Inclusion team supported assessments of communications infrastructure for Feed the Future in rural Uganda, and is currently working with the USAID Mission in Uganda to operationalize connectivity interventions identified as part of the assessment. In addition, the Digital Inclusion Team will be working with a number of Missions to incorporate connectivity into their Country Development Cooperation Strategies, which sets the Mission's development strategy and goals for the next five years. These kinds of efforts will become more widespread over the coming years as USAID continues to pivot towards integrating connectivity into USAID priority programs as a foundation for meeting development objectives.

Department of Commerce

NTIA and the Department of Commerce, armed with lessons learned and best practices from BTOP and BroadbandUSA, look forward to sharing lessons learned and best practices in support of the Global Connect Initiative's goal of bringing an additional 1.5 billion people online by 2020. BroadbandUSA's technical assistance team provided free hands-on, one-to-one support to local government officials and other key stakeholders on a range of broadband projects nationwide. In furtherance of that goal, NTIA and Commerce welcome the opportunity to include these experiences in the work of the Department's digital trade officers.

Department of the Treasury

The Department of the Treasury will continue to support the Global Connect Initiative by holding MDB Outreach Sub-Steering Group meetings to work with the MDBs to identify whether lack of ICT connectivity is a constraint to economic growth. Treasury also will support efforts to raise the profile of the Global Connect Initiative at the 2017 Annual Spring Meetings of the World Bank and International Monetary Fund.

FCC

The FCC will continue to engage with its counterparts worldwide in order to promote the effective telecommunications regulations necessary for ensuring global connectivity. To do this, the FCC will focus on staff-level capacity building assistance for its foreign counterparts on regulatory and policy topics identified as priorities, including broadband deployment and spectrum management.

MCC

MCC has initiated an agency-level strategic review of its Digital and ICT portfolio. Historically MCC's digital and ICT portfolio has consisted of inputs that seek to optimize the outcomes or impact of projects in sectors such as education, health or trade facilitation. The strategic review includes three components: (1) a review of MCC business processes to evaluate if changes are called for in how digital and ICT projects are identified, developed, implemented, and evaluated; (2) the development of a systems dynamics framework tool to help assess, manage, and evaluate ICT projects; and, (3) technical support to field test these tools. MCC is committed to reviewing its pipeline for opportunities to strategically invest in the digital and ICT space. New opportunities may either occur because digital and ICT issues are identified as standalone binding constraints to economic growth in a partner country or because they are seen as a key element of a root cause to a binding constraint in another sector. Based on MCC's prior experiences, and the record of other donors, we anticipate that the latter will represent a vast majority of future opportunities for MCC engagement in this space.
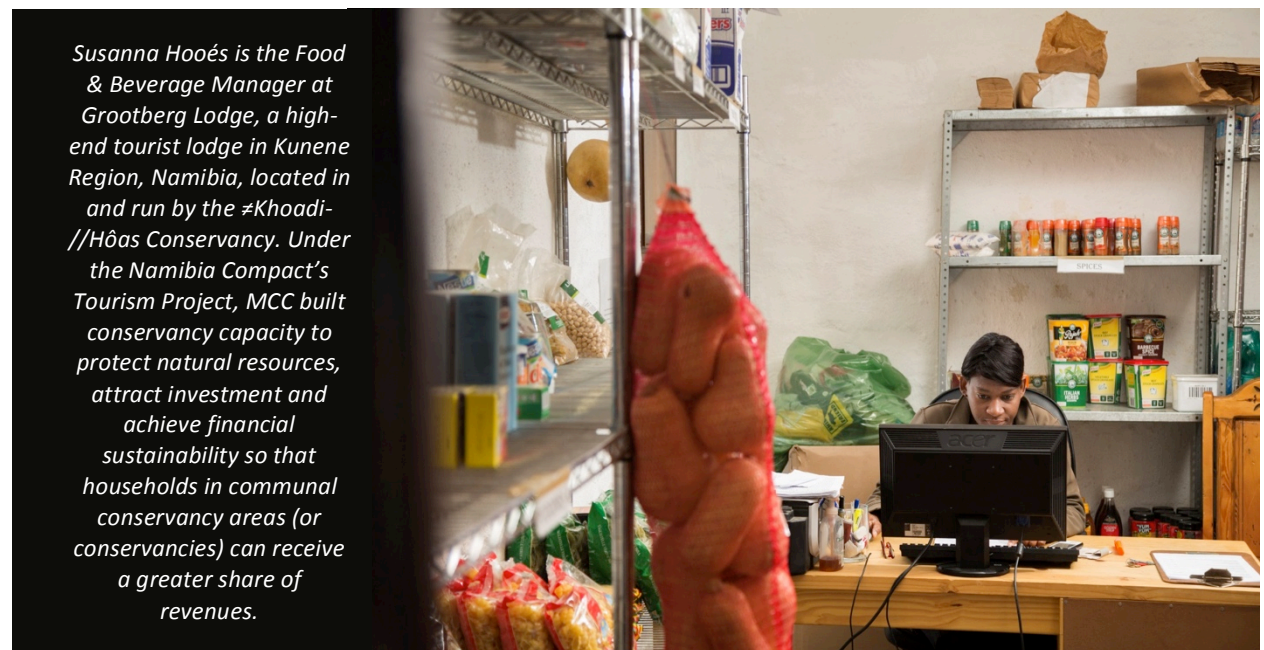
Susanna Hooés is the Food & Beverage Manager at Grootberg Lodge, a high-end tourist lodge in Kunene Region, Namibia, located in and run by the ≠Khoadi-//Hôas Conservancy. Under the Namibia Compact's Tourism Project, MCC built conservancy capacity to protect natural resources, attract investment and achieve financial sustainability so that households in communal conservancy areas (or conservancies) can receive a greater share of revenues.

(Millennium Challenge Corporation – Namibia – March 12, 2014 – Photo by Jake Lyell)

USTDA

In 2017, USTDA will continue to leverage U.S. expertise and technology to support the development of sustainable telecommunications infrastructure in emerging economies. USTDA intends to continue working with its partners in Cape Town, South Africa, to apply smart solutions for the expansion of digital infrastructure, building on previous USTDA funding provided to the city to develop a digital

inclusion strategy for its townships. This support has extended its fiber optic backbone to the townships and has connected over 900,000 users to wireless Internet, in addition to providing employment, training and generally spurring economic growth across the area and resulted in the export of U.S. equipment as part of the build-out. In October 2016, USTDA resumed its program in Argentina for the time since 2005. USTDA will pursue projects with the public and private sectors to advance IT infrastructure across the country. USTDA foresees considerable opportunities in the sector in Argentina, and there is robust interest from U.S. industry in being part of these solutions. In Brazil, USTDA will seek to fund projects that further the U.S.-Brazil Information and Communications Technologies Partnership. In India, USTDA will continue to fund activities in support of the Smart Solutions for Smart Cities Initiative in the cities of Visakhapatnam, Allahabad, and Ajmer. In addition, as recommended at the U.S.-India CEO Forum in August 2016, USTDA is considering programming to build technical capacity for digital infrastructure expansion across India at the national and state levels.

Small Business Administration

The U.S. Small Business Administration (SBA) will continue to leverage its expertise in entrepreneurship and small business development to convey the importance of connectivity with partner governments. SBA, together with South Africa, will host the 3rd Global SME Ministerial in March 2017. The gathering will bring together ministers in charge of small business to discuss policies and programs that spur entrepreneurial growth – including connectivity, trade facilitation, and gender inclusion. The Ministerial also will offer an opportunity to engage with a global stakeholder base, taking place on the sidelines of the Global Entrepreneurship Congress (GEC), which brings together thousands of entrepreneurs, investors, researchers, and other entrepreneurship champions from more than 160 countries. The theme of the 2017 GEC is "Digital Disruption" and its impact on entrepreneurship and, for the ministerial discussion, its impact on government policies, programs, and services.

As a result of the Digital Inclusion wireless project supported by USTDA, the City of Cape Town is installing 130 Wi-Fi hotspots in and around public buildings, like this library, where community members congregate for services (Cape Town, South Africa)

In the Western Hemisphere, SBA will continue to offer support for the expansion of the Small Business Network of the Americas by working with governments to exchange best practices. In the case of Argentina, SBA's Office of International Trade intends to continue to collaborate with its partners in the Ministry of Production in developing bilateral understandings of the importance of transparency and other good regulatory practices for trade, including e-rulemaking, through the U.S.-Argentina Commercial Dialogue and the planned Argentina- U.S. Regulatory Coherence for Small Business Roundtable in Córdoba, Argentina, in March 2017.
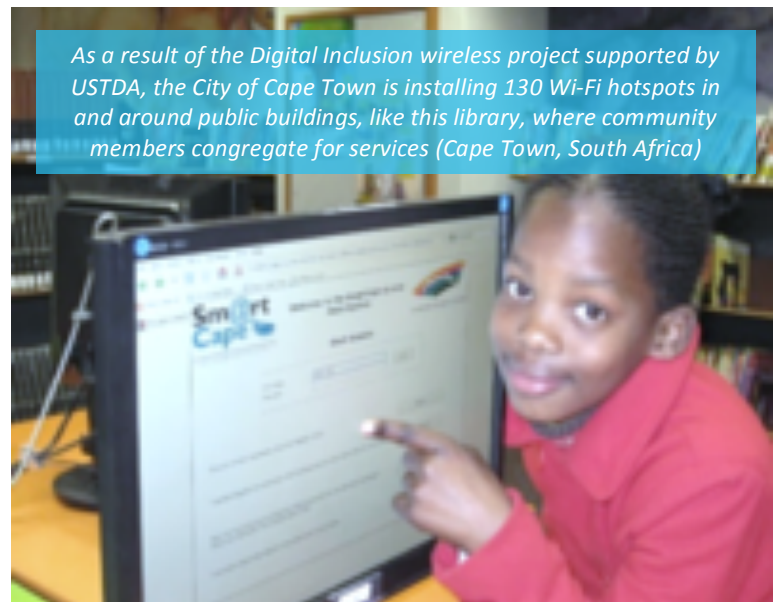
CONCLUSION

The Steering Group's considerable efforts are having an impact, although significant work remains. In the coming year, the Steering Group will build on its momentum from actions in 2016 to strengthen Internet connectivity, improve regulatory frameworks, and expand digital literacy programs to reduce the digital divide. The goal of bringing the next 1.5 billion people online by 2020 is an important one. Achieving it will help foster new products, business models, and economic growth. It will help improve outcomes in delivering education and healthcare services. It will help deploy applications that improve agricultural productivity and energy efficiency. And it will help advance human development and create new opportunities, some which we have not yet imagined. The Steering Group will continue to do its part to achieve this goal.

Global Connect International Connectivity Steering Group

Department of State
Department of the Treasury
Department of Defense
Department of Commerce
Department of Transportation
Office of the United States Trade Representative
U.S. Small Business Administration
U.S. Trade and Development Agency
Millennium Challenge Corporation
U.S. Overseas Private Investment Corporation
Export-Import Bank of the United States
U.S. Agency for International Development
U.S. Federal Communications Commission
National Economic Council
National Security Staff
Office of Science and Technology Policy